

REPORT DOCUMENTATION PAGE			Form Approved OMB No. 0704-0188		
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.					
1. REPORT DATE (DD-MM-YYYY) 08-05-2012		2. REPORT TYPE		3. DATES COVERED (From - To)	
4. TITLE AND SUBTITLE Overpopulated, Underdeveloped Urban Agglomerations: Tomorrow's "Unstable" Operating Environment			5a. CONTRACT NUMBER		
			5b. GRANT NUMBER		
			5c. PROGRAM ELEMENT NUMBER		
6. AUTHOR(S) Michael Stoker, LCDR, USN Paper Advisor: N/A			5d. PROJECT NUMBER		
			5e. TASK NUMBER		
			5f. WORK UNIT NUMBER		
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)			8. PERFORMING ORGANIZATION REPORT NUMBER		
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)			10. SPONSOR/MONITOR'S ACRONYM(S)		
			11. SPONSOR/MONITOR'S REPORT NUMBER(S)		
12. DISTRIBUTION / AVAILABILITY STATEMENT Distribution Statement A: Approved for public release; Distribution is unlimited.					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT This paper asserts that a unique future operational environment is developing: overpopulated, underdeveloped urban agglomerations. A proposed definition for this operating environment is (or would be) an overpopulated urban area which is located within a developing or underdeveloped state with a population exceeding 5 million people with a government that is unable to provide basic services to its inhabitants and lacks resources to develop and maintain a suitable infrastructure. This paper argues that future operational commanders conducting military operations in overpopulated, underdeveloped urban agglomerations will likely fail to meet Phase IV stability functional objectives (e.g. security, humanitarian assistance, economic stabilization and infrastructure, rule of law, and governance and participation) and criteria for transitioning to civil authorities unless the DoD begins to recognize the unique characteristics of these operating environments, both intrinsically and doctrinally. Although this operating environment would be challenging for major combat phases (i.e. Phases I-III), emphasis is placed on Phases IV-V because the advantages of superior combat power, intelligence, and force adaptability either have significantly less effect on success in Phases IV-V or are offset to some degree by the unique characteristics of the operational environment. This paper examines cornerstone joint doctrine on stability operations in an effort to determine if it provides suitable guidance for stability operations in this new operating environment, and concludes with simple measures that can be taken today to mitigate the risk of operational failure in the future.					
15. SUBJECT TERMS Operational Environment; Overpopulated, Underdeveloped Urban Agglomeration; Stability Operations (Phase IV)					
16. SECURITY CLASSIFICATION:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES 25	19a. NAME OF RESPONSIBLE PERSON
a. REPORT UNCLASSIFIED	b. ABSTRACT UNCLASSIFIED	c. THIS PAGE UNCLASSIFIED			19b. TELEPHONE NUMBER (include area code)

NAVAL WAR COLLEGE

Newport, RI



OVERPOPULATED, UNDERDEVELOPED URBAN AGGLOMERATIONS:

TOMORROW'S "UNSTABLE" OPERATING ENVIRONMENT

By

Michael A. Stoker

LCDR, USN

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

//original signed//

May 8, 2012

Contents

Urbanization – Crowded Out by Other Issues	1
The Overpopulated, Underdeveloped Urban Agglomeration Defined	5
An Urban Crisis in the Making	7
Stability Operations in the “Unstable” Environment	9
Recommendations and Conclusions	16
Bibliography	20

Abstract

This paper asserts that a unique future operational environment is developing: overpopulated, underdeveloped urban agglomerations. A proposed definition for this operating environment is (or would be) an overpopulated urban area which is located within a developing or underdeveloped state with a population exceeding 5 million people with a government that is unable to provide basic services to its inhabitants and lacks resources to develop and maintain a suitable infrastructure. This paper argues that future operational commanders conducting military operations in overpopulated, underdeveloped urban agglomerations will likely fail to meet Phase IV stability functional objectives (e.g. security, humanitarian assistance, economic stabilization and infrastructure, rule of law, and governance and participation) and criteria for transitioning to civil authorities unless the DOD begins to recognize the unique characteristics of these operating environments, both intrinsically and doctrinally. Although this operating environment would be challenging for major combat phases (i.e. Phases I-III), emphasis is placed on Phases IV-V because the advantages of superior combat power, intelligence, and force adaptability either have significantly less effect on success in Phases IV-V or are offset to some degree by the unique characteristics of the operational environment. This paper examines cornerstone joint doctrine on stability operations in an effort to determine if it provides suitable guidance for stability operations in this new operating environment, and concludes with simple measures that can be taken today to mitigate the risk of operational failure in the future.

Urbanization – Crowded Out by Other Issues

As the U.S. military footprint continues to decrease in Iraq and Afghanistan, the United States is approaching a policy crossroads, with a shift in emphasis from the Middle East to the Asia-Pacific region. Secretary of State Hillary Clinton recently wrote in *Foreign Policy* that the U.S. was at a policy “pivot-point,” asserting that “one of the most important tasks over the next decade will be to lock in a substantially increased investment—diplomatic, economic, strategic, and otherwise—in the Asia-Pacific region.”¹ From the military perspective, this suggests a significant shift in resources, both physical and intellectual, from ground-based combat operations to those in the maritime domain. While it is hard to contest that this is a sound policy shift, it is important that any focus on Asia-Pacific geopolitics is not at the expense of ignoring other global trends that might have equal, if not greater, security implications. One could argue that there are global trends already underway that might impact U.S. security policy and activities far greater than any rising power in the Asia-Pacific region.

One trend that is often underappreciated, especially in the security sector, is urbanization. Urbanization is occurring at an alarming rate, especially in rising powers (China, India, Indonesia, and Brazil), and developing and underdeveloped States.² McKinsey Global Institute estimates that China will have over 220 cities with a population exceeding one million people by 2030 and its cities will absorb an additional 400 million people during that period alone.³ During the same time frame, India expects to have 68 cities with over one

¹. Secretary of State Hillary Clinton. “America’s Pacific Century.” *Foreign Policy* 189 (2011): 57.

². For simplicity, states fall into one of three general categories: developed, developing, or underdeveloped. Although the DOD recognizes developing or underdeveloped states as failed, failing, or recovering, the further distinction as failed, failing, or recovering is beyond the scope of this work.

³. Richard Dobbs, “Metropolis Now: Mega Cities,” *Foreign Policy* 181 (2010): 132.

million people, adding an estimated 215 million urban dwellers in the process.⁴ Turning to Africa, most estimates indicate that approximately 300 million Africans lived in urban settlements in 2005. The same year, the United Nations estimated that “in the next 25 years, 400 million people will be added to the African urban population, putting tremendous pressure on cities and towns.⁵” This is problematic because Africa’s urbanization rate of 5% is the world’s fastest.⁶ Other regions are experiencing a rapid pace of urbanization as well; similar growth patterns can be found in the Middle East, Central Asia, Oceania, and South America.⁷

Looking at the phenomenon of urbanization through a military lens, three critical observations must be made: first, the fastest urbanization rates are occurring in developing or underdeveloped states; second, this trend is creating urban agglomerations that are often underdeveloped because they lack adequate infrastructure, land reform policies, and basic health, sanitation, and security services; finally, it is common that many of these urban agglomerations do not have the capacity to accommodate the mass influx of people that they must absorb, making them overpopulated. Taken collectively, these trends suggest that many of the world’s future metropolises will be overpopulated, underdeveloped urban agglomerations. These urban areas would present a unique operating environment for military commanders, with a toxic set of operational challenges. Recent operations in Iraq and Afghanistan demonstrate that one of the greatest challenges for operational commanders

⁴. Ibid., 132.

⁵. Dr. Anna Kajumulu Tibaijuka. “Africa on the Move: an Urban Crisis in the Making,” A submission to the Commission for Africa by the United Nations Human Settlements Program (UN-HABITAT), December 2004, 2.

⁶. Ibid., 2.

⁷. Data that substantiates this statement can be found in the United Nations Human Settlements Program (UN-HABITAT) book *State of the World’s Cities 2011: Bridging the Divide*. Gora Mboup, Eduardo Moreno, and Oyeibanji Oyeyinka. *State of the World’s Cities 2011: Bridging the Divide* (London: Earthscan Publications, 2011).

is achieving success in stability operations (Phase IV) and creating conditions that allow for a successful transition to civil authority (Phase V). This observation brings an important question to bear: is the Department of Defense (DOD) in a position to achieve success during stability operations if the U.S. underwent major combat or disaster relief operations in an underdeveloped, overpopulated urban agglomeration? All available evidence suggests that the answer is *no*. Future operational commanders conducting military operations in overpopulated, underdeveloped urban agglomerations will likely fail to meet Phase IV stability functional objectives and criteria for transitioning to civil authorities unless the DOD begins to recognize the unique characteristics of these operating environments, both intrinsically and doctrinally.

In order to support this thesis, an investigation is necessary to identify characteristics unique to overpopulated, underdeveloped urban agglomerations. This will be accomplished by examining common attributes found in the majority of these cities, and why poor governance practices fuel their growth. Once the concept of overpopulated, underdeveloped urban agglomerations is understood *intrinsically*, cornerstone DOD doctrine on stability operations will be reviewed in an effort to determine if this future operating environment is recognized and accounted for *doctrinally*. This will be accomplished by analyzing stability operational functions outlined in *Joint Publication 3-07 Stability Operations (JP 3-07)*, specifically: security, humanitarian assistance (HA), economic stabilization and infrastructure, rule of law, and governance and participation.⁸ From this analysis, a set of conclusions and recommendations will be offered. One observation that is worth noting upfront is that DOD publications are written with the *fragile state* in mind; there is little

⁸. U.S. Department of Defense, *Joint Publication 3-07 Stability Operations* (Washington, DC: GPO, 2011), III-1.

emphasis on the *fragile city within the fragile state* and how the latter could be more challenging than the former.

One could easily argue that doctrine already exists that addresses a wide range of military operations in urban areas. *U.S. Army Field Manual 90-10 Military Operations in Urbanized Terrain (FM 90-10)* is an excellent example of doctrine designed with particular emphasis on the urban environment, with a detailed analysis of how to conduct offensive and defensive operations, as well as performing combat support and combat service support functions in these areas. *FM 90-10* is very useful for commanders to plan and execute operations in urban environments, especially at the tactical level; *FM 90-10* addresses considerations for commanders at the platoon, company, and battalion levels in great detail. It even addresses considerations for major combat operations at the operational level of war. One could say that the operational environment proposed here, the overpopulated, underdeveloped urban agglomeration, already has doctrine to guide the design and execution of combat operations.

While this may be the case, it is worth pause to recall that the argument presented placed particular emphasis on stability operations. Analyzing the implications of conducting stability operations in overpopulated, underdeveloped urban agglomerations raises an important question: why focus this analysis at the end (i.e. final phases) of military operations? What about the effort required in combat phases to seize the initiative (Phase II) and dominate (Phase III)? It was just stated that doctrine already exists to support operations in the operational environment proposed in this work. Although it can easily be argued that overpopulated, underdeveloped urban agglomerations would present unique challenges in these phases of operations, the U.S. military's superior combat power, intelligence apparatus,

technology, and adaptability have historically proven that the U.S. military is likely to overcome any challenges unique to a certain operating environment and succeed in these phases of military operations. Accordingly, emphasis is placed on Phase IV and Phase V operations when the advantages outlined above have either significantly less effect on success or are offset to some degree by the unique characteristics of the operational environment.

The Overpopulated, Underdeveloped Urban Agglomeration Defined

Although recent works produced about urbanization have succeeded to some degree to grasp this demographic trend, little research has occurred to create the link between this phenomenon and how it might shape the future of many developing metropolises from the perspective of security. It would be useful if this link was investigated further.

Few “models” exist that look at urbanization from the perspective of the individual city. Despite this, two such cases were found that are useful for the purpose of this work: the instant city and the feral city. National Public Radio (NPR) correspondent Steve Inskeep coined the former after completing a project to chart the rapid growth of Pakistan’s largest city, Karachi. He defines an instant city as “a metropolitan area that has grown since 1945 at a substantially higher rate than the population to which it belongs.”⁹ Karachi grew from 400,000 people at the end of World War II to exceed 13 million by 2011, which meets his criteria.¹⁰ Similarly, multiple agencies, including the Africa Center for Strategic Studies (ACSS), predict that Kinshasa-Brazzaville in former Zaire (this urban agglomeration sprawls between the Republic of Congo and the Democratic Republic of Congo) may be the largest

⁹. Steve Inskeep, *Instant City: Life and Death in Karachi* (London: Penguin, 2011), 3.

¹⁰. Ibid, 1.

metropolis in Africa by 2025, with a population approaching 20 million.¹¹ This is astounding, considering that Kinshasa's population in 1940 was only 50,000.¹² Turning back to Karachi, Inskeep's broad summary below applies to many other cities as well:

[n]o one metropolis could capture the full variety of the world's growing cities, but Karachi is representative in several ways. It's on the Asian coastline, where massive urban growth is underway. Its modern foundations were laid during the age of European colonialism. Its great expansion coincided with the post-war collapse of empire, when industrialization attracted people to the city—as did the desperation of people seeking shelter from political or economic catastrophes.¹³

While Inskeep's concept of an instant city is useful from a demographic perspective, it does little to identify an urban area unique in its own right. Naval War College Professor Richard Norton comes closer to that end with his concept of a feral city. He identifies that “the putative ‘feral city’ is (or would be) a metropolis with a population of more than a million people in a state the government of which has lost the ability to maintain the rule of law within the city's boundaries yet remains a functioning actor in the greater international system.”¹⁴ While he does state that such a city—with the exception of Mogadishu—does not exist today, it is very likely that such a place will exist in the future.¹⁵ Professor Norton provides a cautionary and sobering summary of just some of the security challenges that a feral city might host:

[s]uch megalopolises will provide exceptionally safe havens for armed resistance groups, especially those having a cultural affinity with at least one sizeable segment's of a city's population. The efficacy and portability of the most modern computing and communicating systems allow the activities of a worldwide terrorist, criminal, or predatory and corrupt commercial network to

¹¹. Steven Commins, “Urban fragility and Security in Africa,” *Africa Center for Strategic Studies Security Brief*, no. 12 (April, 2011), <http://africacenter.org/2011/04/urban-fragility-and-security-in-africa/>.

¹². Dr. Anna Kajumulu Tibaijuka, “Africa on the Move: an Urban Crisis in the Making,” 6.

¹³. *Ibid.*, 3.

¹⁴. Richard Norton, “Feral Cities,” *Naval War College Review*, Vol. LVI (2003), No. 4: 97.

¹⁵. *Ibid.*, 98.

be coordinated and directed with equipment easily contained on the open market and packed into a minivan. The vast size of a feral city, with its buildings, other structures, and subterranean spaces, would offer nearly perfect protection from overhead sensors, whether satellites or unmanned aerial vehicles.¹⁶

Although a feral city gets closer conceptually to a unique urban battle space, many of the operational and tactical challenges in such a place are arguably not much different from other existing operational environments. However, if concepts from instant and feral cities are combined, a unique operating environment emerges that is unlike any that currently exists: the overpopulated, underdeveloped urban agglomeration (OU2A). A suggested definition for this operating environment is (or would be) an overpopulated urban area which is located within a developing or underdeveloped state with a population exceeding 5 million people with a government that is unable to provide basic services to its inhabitants, and lacks resources to develop and maintain a suitable infrastructure.¹⁷

An Urban Crisis in the Making

While it is important to define this unique future operating environment, it is equally important to recognize why the growth of OU2As is potentially *irreversible*. Additionally, it can be argued that the challenges these operating environments pose to the U.S. military increase commensurate with the growth of the population that such a city absorbs, especially in the case of stability operations. In order to substantiate these claims, a phenomenon common in developing and underdeveloped states must be examined, specifically the impact of poor rural land reform policies on population migration. It is this relationship that fuels

¹⁶. Ibid., 99.

¹⁷. The term overpopulated, underdeveloped urban agglomeration and its definition were developed independently by the author. This concept or the author's terminology could not be found in any other scholarly work, professional journal, or news periodical. The population was established at 5+ million inhabitants because of the challenges of this population or any population in excess of 5 million. A suitable acronym would be OU2A.

the development of OU2As and truly marks them as an urban crisis in the making—one that will have severe security implications for decades to come.

Developed states enjoy the benefits of successful land reform; they are able to achieve the traditional reform objectives of equity and productivity.¹⁸ However, this is rarely the case in developing and underdeveloped states, which fail to formulate and implement effective rural land reform policies, to include long-term planning, agricultural education and training, rural infrastructure development, and procedures that ensure property rights and tenure security.¹⁹ The impact of the absence of effective rural land reform is two-fold: first, peak agricultural productivity is rarely achieved, placing pressure on governments to feed their populations through international aid and imports; second, poor agricultural practices discourage farming and make large tracts of rural land untenable, causing people to migrate to urban areas in search of work. Consequently, a state's failure to adopt sound rural land reform policies exposes a comparable failure in urban land reform as millions of people migrate to cities that are not prepared to absorb them, creating a unique urban fragility.

The failure of developing and underdeveloped states to formulate urban land reform policies to manage urban growth results in the majority of migrant people being absorbed into informal settlements, living in some of the most abhorrent conditions found on Earth. Characteristics of the Kibera slum (Nairobi) are common in such places:

[i]t does not officially exist. The government provides nothing. If there are schools or latrines or washrooms, they are privately run. The government

¹⁸. Jan Groenwald, "Conditions for Successful Land Reform in Africa," a paper presented at Pre-IAAE Conference on African Agricultural Economics, Bloemfontein, South Africa, August 13-14, 2003: 2.

¹⁹. Ibid, 4-10.

provides no basic services, no schools, no hospitals, no clinics, no running water, and no lavatories. It does, however, own nearly all of the land.²⁰

These informal settlements often occupy land that has limited potential for development, sprawling on hillsides, low-lying areas, or close to unsanitary tracts of land such as landfills.²¹ Often, little incentive exists to do anything with these parcels of land; developers find these areas unsuitable for lucrative construction projects and pressure on governments to act in the interest of slum dwellers is rare. In Sub-Saharan Africa alone, over 70% of the region's urban population lives in informal settlements that lack basic services like sewage, potable water, sanitation services, and access to electricity.²²

Millions of hopeful people migrate to urban centers, met by governments that are ill-prepared to accommodate them due to a lack of effective governance and limited financial and intellectual capital to have a positive, lasting impact on the situation. Collectively, these OU2As are growing at an alarming rate and represent a new operating environment with a potentially volatile population. Flocking to these urban centers with the prospect of hope that was suppressed when living in rural settlements, many of the inhabitants of OU2As bring with them rising expectations. Over 100 years ago, Alexis DeToqueville cautioned that “evils which have been patiently ignored when they seem inevitable become intolerable once the idea of escape from them is suggested.”²³

Stability Operations in an “Unstable” Environment

²⁰. “The Strange Allure of the Slums,” *The Economist* (May 3, 2007), <http://www.economist.com/node/9070714>.

²¹. Dr. Anna Kajumulo Tibaijuka. “Africa on the Move. An Urban Crisis in the Making,” 7.

²². Ibid., 4.

²³. This Alexis de Toqueville quotation was used in a book that examines various aspects of sociology. M.S. Bassis, R.J. Gelles, and A. Levine, *Sociology, an Introduction*, New York: McGraw Hill, 1991, 192. This is commonly referred to as *rising expectations*. Jan Groenwald wrote that “people in a daily struggle just to exist and survive are very unlikely to rise in protest, but if their economic condition improves, or if they are given what appears to be realistic promises, their expectations rise.” Jan Groenwald, “Conditions for Successful Land Reform in Africa,” 3.

Shifting to military doctrine, the suitability of current U.S. doctrine to stability operations in an OU2A will be examined. Although many publications will be reviewed, emphasis will be placed on *JP 3-07*, the DOD's cornerstone stability operations document. Stability functional objectives will be reviewed with an aim at answering the following question: given the unique characteristics of this operating environment, can the functional objectives identified in joint doctrine be met to the extent that is necessary to transition to civil authority? Many conclusions can be drawn from this analysis, above all the following: first, the necessary conditions to meet each functional objective are unlikely to be met due to the intrinsic nature of OU2As;²⁴ second, the challenging security conditions that exist in this operating environment are such that the DOD would likely find itself the lead U.S. agency in Phase IV operations—a role that the DOD is normally not expected to perform if current doctrine is used as an indicator.

For an operational commander, while it is expected that the DOD will play *some* role in stability operations, normally the DOD will not play the *lead* role in these activities. *JP 3-07* offers the following:

[t]he military's predominant presence and its ability to C2 forces and provide logistics under extreme conditions may initially give it the *de facto* lead in stability operations normally governed by other agencies that lack such capabilities. However, most stability operations likely will be in support of, or transition to support of, U.S. diplomatic, U.N., or H.N. efforts.²⁵

If conditions in the operating environment were in some way unique or extreme, it can be argued that a non-DOD activity may not be in a position to assume the lead role in stability

²⁴. The necessary conditions to meet stability functional objectives are those identified by the U.S. Institute for Peace and the U.S. Army Peacekeeping and Stability Institute, found in *Guiding Principles for Stabilization and Reconstruction*. These conditions were adopted in *Joint Publication 3-07 Stability Operations*.

²⁵. U.S. Department of Defense, *Joint Publication 3-07 Stability Operations*, II-13.

operations. Looking at operational functions in stability operations,²⁶ achieving the necessary conditions for each function with a chance at long-term prosperity can only occur through establishing and maintaining a safe and secure environment (i.e. security), which is normally the province of the DOD. Given the unique security conditions in OU2As, it is likely that the *de facto* lead (DOD) would continue to serve in this capacity in stability operations, long after a turn-over of that responsibility normally should take place.

Strength is added to the argument that the DOD would retain lead agency status beyond its notional time-frame when one considers that often security services in OU2As are either conducted by ad hoc non-state actors or absent, especially in sprawling slums where the majority of the population resides. As an example, an ACSS fellow recently cited that African police forces are weak, under resourced, and corrupt, adding that “it is not always appreciated that non-state actors are so numerous and diverse that they are the *dominant* police providers.”²⁷ While it may be good that *some* entity is filling the gap, this poses unique challenges for the DOD. First, where are state-sponsored police providing services, and to what extent? Second, who is providing comparable services elsewhere? Finally, where are such services absent? These are not just considerations; rather, they are perhaps the most important part of the Joint Intelligence Preparation of the Operational Environment

²⁶. Security, humanitarian assistance, economic stabilization and infrastructure, rule of law, and governance and participation.

²⁷. Bruce Baker, “Nonstate Policing: Expanding the Scope for Tackling Africa’s Urban Violence,” *Africa Center for Strategic Studies Security Brief*, no. 7 (September, 2010), <http://africacenter.org/2010/09/nonstate-policing-expanding-the-scope-for-tackling-africa%E2%80%99s-urban-violence/>. Baker adds that these non-state police services are not without criticism. In fact, “some are indeed prone to human rights abuses and may be unreliable, have poor skills, and lack both transparency and vertical accountability.”

(JIPOE).²⁸ After all, as another ACSS fellow wrote, “The slums of Kibera (Nairobi), Karu (Abuja), Soweto (Johannesburg), Camp Luka (Kinshasa), Bonaberi (Douala) and elsewhere are largely no-go zones for state security forces.”²⁹

Because establishing a safe and secure environment is necessary to pursue the objectives of other stability operational functions, it is worth pause to investigate what force level would be suitable to that end.³⁰ According to The Rand Corporation, historical employment of British forces conducting stability operations suggests a benchmark of 20-25 security forces per 1000 inhabitants, cautioning that even higher ratios may be required in particularly hostile environments.³¹ If this historically proven force ratio was used to determine the force requirement for stability operations in an OU2A, the figure would be staggering. UN-HABITAT predicts “by 2015, Lagos [Nigeria] is expected to have a population of about 23 million, making it the third largest mega-city in the world after Tokyo and Mumbai.”³² Achieving the force ratio of 20-25 per 1000 inhabitants in Lagos would require 460,000-575,000 troops. As a point of reference, the force end strength of the U.S. Army in 2010 was 562,400 in the active duty component.³³ Additionally, the U.S. force

²⁸. *Joint Publication 3-07 Stability Operations* states (p. II-4) that “JIPOE analysts must develop a comprehensive understanding of the society, social structure, culture, power and authority, and interests inside and outside the local population.”

²⁹. Steven Commins, “Urban fragility and Security in Africa,” accessed online.

³⁰. *Joint Publication 3-07 Stability Operations* identifies that the necessary conditions to achieve a safe and secure environment are cessation of large-scale violence, public order, legitimate state monopoly over the means of violence, physical security, and territorial security (p. III-6).

³¹. James Quinlivan, “Burden of Victory: the Painful Arithmetic of Stability Operations,” *Rand Review*, Vol. 27, No. 2 (2003): 28. The historical reference is substantiated by Quinlivan’s statement (p. 28) “to maintain security in Northern Ireland, the British employed a security force (consisting of British army troops plus police from the Royal Ulster Constabulary) at a ratio of about 20 per thousand inhabitants.” This is about the same force ratio that the British employed during the Malayan counterinsurgency in the middle of the 20th century.”

³². Dr. Anna Kajumulu Tibaijuka, “Africa on the Move: an Urban Crisis in the Making,” 6.

³³. Global Security, last modified May 7, 2011, <http://www.globalsecurity.org/military/agency/end-strength.htm>.

contribution in Iraq at the height of the 2008 surge was 157,800 troops,³⁴ which equals one third of the force estimate that would be required for stabilization in Lagos alone.

The challenges that the DOD would face in order to establish a safe and secure environment in an OU2A are significant, notwithstanding the effort that would be required to cultivate necessary conditions within other stability operational functions. Although stability operations aim at the synchronization of operational functions, it can be argued in the case of this operating environment that the sequencing of security and HA would be necessary before pursuing economic and infrastructure development, rule of law, and governance. If the aim of HA is to ensure social well-being, with particular emphasis on “access to and delivery of basic needs and services (water, food, shelter, sanitation, and health services),³⁵” then the tasks to meet this end at the operational level would pose several questions. How many people require assistance? Where they are located? What extent of assistance is required? Finally, how would fair and even distribution of aid / assistance occur throughout the operating environment?

Recall the living conditions that the majority of an OU2A’s inhabitants endure, described below of Mumbai, which has a population estimated between 14-18 million:

[m]iserable housing, no security of tenure, contaminated water for the 40% lucky enough to have it piped, mud for four months out of 12, bribes needed for a blind eye to be turned to an illegal electricity connection, one lavatory for 800 people, the stink of sewage, and so on.³⁶

Perhaps the greatest challenge in this operating environment is the aspect of *fair and even distribution*. Determining the population size within this operating environment is one of

³⁴. U.S. Congressional Research Service, *Troop Levels in the Afghan and Iraq Wars FY2001-FY2012: Cost and Potential* (Washington DC: GPO, 2009), 12.

³⁵. U.S. Department of Defense, *Joint Publication 3-07 Stability Operations*, III-18.

³⁶. “The Strange Allure of the Slums,” *The Economist*, accessed online.

many reasons that this would be so challenging. In many cases, population estimates vary by hundreds of thousands, even millions, due to the prominence of sprawling, densely packed slums that are all-too-often “no go” zones for government officials.³⁷ From an HA perspective, the challenges here go beyond the scale of aid that would be required; a large portion of the population could turn hostile or violent if any misperceptions about fair and even distribution surfaced, especially if one or more ethnic groups received less aid and attention than others in an OU2A.³⁸ Clearly, the challenges presented here could be on a scale out of all proportion to those that the DOD has encountered in recent history.³⁹

Examining economic stabilization and infrastructure, joint doctrine recognizes the importance of restoring a vibrant, functioning economy, asserting “while economic measures and reconstruction are not the panacea for stability, they should constitute a significant component of the solution.”⁴⁰ JP 3-07 identifies that the following must be restored: electricity, transportation, communications, health and sanitation, education, public services, environmental control, and economic production and distribution.⁴¹ Achieving these conditions *anywhere* is a challenge that requires extensive coordination among stability

³⁷. Ibid., accessed online. Population modeling in overpopulated areas is challenging. This article looks closely at the Kibera slum in Nairobi, citing that “Luanda, Kinshasa and Lagos, the world’s fastest growing mega-city, may all have slums to match Kibera, whose population is put at anything from 600,000 to 1.2 million, depending both on the estimator and on the time of year, many of its inhabitants being seasonal migrants.” Kibera is just one of many slums in Nairobi, which has a population estimated to exceed 4 million (source: UN-HABITAT).

³⁸. Failure to distribute aid and assistance in a fair and even manner could be a source of upheaval or violence because of the ethnic diversity and division often found in informal urban settlements. As an example, the Korogocho slum in Nairobi contains an estimated 120,000 inhabitants, comprising some 30 different ethnic groups (source: <http://www.korogocho.org>).

³⁹. U.S. Congressional Research Service, *Haiti Earthquake: Crisis and Response* (Washington, DC: GPO, 2010), 3. One of the authors, economist Andrew Powell, stated that “this disaster, given the size of Haiti ... is the most devastating catastrophe that a country has experienced possibly ever.” The 7.0 magnitude earthquake caused between \$8-14 billion in damage and impacted over 3 million people, roughly one third of the population. Of those affected, 1.2 million were displaced. Compare the HA/DR effort in Haiti to that which would be required for a city like Lagos, which is expected to have a population exceeding 23 million people by 2015 (footnote 31 refers).

⁴⁰. U.S. Department of Defense, *Joint Publication 3-07 Stability Operations*, III-27.

⁴¹. Ibid., III-27.

actors, to include the interagency, non-government organizations (NGOs), inter-government organizations (IGOs), and the host nation (HN). Performing these tasks in an OU2A brings one important distinction of this operating environment to bear: due to the lack of infrastructure and absence of public services for the majority of its inhabitants, the activities here are better characterized as *construction* efforts vice *reconstruction* efforts. The distinction is worth noting because the effort required to *create* infrastructure is remarkably greater than that which is required to *restore* infrastructure on any scale, let alone the grand scale proposed in an OU2A. It is doubtful that units designed to provide short-term, low-cost quick impact projects like Provincial Reconstruction Teams would provide any measurable benefit, or “deliver an immediate and highly visible impact ... at the local provincial or community level.”⁴² Similar to the dilemma with humanitarian aid, there would be comparable implications if reconstruction and economic stabilization activities were not distributed in a fair and even manner.

It is not customary for the DOD to be the lead agency in establishing rule of law, which is “characterized by just legal frameworks, public order, accountability to the law, access to justice, and a culture of lawlessness.”⁴³ However, the DOD is usually the lead agency tasked to train and equip police and security forces. As an example, a developed state like the U.S. has an average of 2.5 police per 1000 inhabitants in urban areas.⁴⁴ Applying these criteria to formulation of a suitable police force in an OU2A such as Lagos, a minimum of 57,500 police would be required to meet this force ratio. Equally problematic is the

⁴². Ibid., xxiii.

⁴³. Ibid., III-41.

⁴⁴. Source: U.S. Department of Justice, Bureau of Justice Statistics. <https://www.ojp.usdoj.gov/bjs>. Additionally, in “Burden of Victory: the Painful Arithmetic of Stability Operations,” James Quinlivan asserts (p. 28) that “the United States as a whole has about 2.3 sworn police officers per thousand residents. Larger cities tend to have higher police to resident ratios.”

observation that police in these areas are plagued with problems, lacking basic equipment, training, even personnel that have basic reading and writing skills. A recent ACSS review in Africa revealed “a long history of police neglect and impunity,” with forces “significantly brutal, corrupt, inefficient, unresponsive and unaccountable to the generality of the population.”⁴⁵ Clearly, the challenges the DOD might face go well beyond the numbers.⁴⁶

The final stability operational function, governance and participation, is normally shared between DOD and Department of State (DOS) at the state level, with the lead role dependent on the circumstances. At the local level, the lead role is normally assigned to the U.S. Agency for International Development (USAID).⁴⁷ Joint doctrine points out that “establishing effective governance at the local level is necessary before developing governance institutions and processes throughout the state,”⁴⁸ which indicates that establishing governance is a sequential process. However, *JP 3-07* also asserts the following:

[d]ifferent forms of non-state authority, which derives its legitimacy from a mixture of force and local acceptance, often fills a vacuum in state governance. Though not always a panacea, strengthening these informal forms of governance may be a better choice than embarking on slow, costly, and potentially inappropriate state-building exercises. Poorly designed institutional building may make matters worse by eroding what local capacity exists.⁴⁹

⁴⁵. Bruce Baker, “Nonstate Policing: Expanding the Scope for Tackling Africa’s Urban Violence,” accessed online.

⁴⁶. Robert Muggah, “More Slums Equals More Violence: Renewing Armed Violence and Urbanization in Africa,” a conference background paper for the Geneva Declaration on Armed Violence and Development, 2007, <http://www.genevadeclaration.org>. Muggah cites (p. 2) that “residents of sprawling slums and shantytowns are exposed to heightened exposure and risk of criminal violence, narcotics, and communicable illness, all of which constitute potent detriments of armed violence. Because they are often located outside the reach of formal policing institutions, impoverished slums are less able to enforce the regulation of the trade and use of weapons, including firearms.” This suggests that the ratio of police to inhabitants required in an overpopulated, underdeveloped urban agglomeration could be much greater than 2.5:1000.

⁴⁷. U.S. Department of Defense, *Joint Publication 3-07 Stability Operations*, III-50,

⁴⁸. *Ibid.*, III-51.

⁴⁹. *Ibid.*, III-51.

This suggests that the DOD and other agencies should accept status quo, ad hoc non-state activities instead of building local and state institutional capacity and capability to govern. This brings up many questions, including the following. Who should the DOD or other agencies partner with in such circumstances? How can a non-state actor guarantee fairness and equity in governing and service provision? Above all, how much and what form of governance is “good enough?” The complex and often unknown attributes of an OU2A, and the state within which it is located, make these questions extremely difficult to answer.

Recommendations and Conclusions

Examining the suitability of existing joint doctrine as a guide for designing stability operations in an OU2A, two conclusions can be made: first, joint doctrine does not recognize such an operating environment, and the collective set of operational challenges contained within such a battle space; second, although doctrine correctly identifies the objectives that must be achieved in stability operations, little is offered on how an operational commander goes about achieving these ends in an OU2A. Although doctrine in multiple agencies recognizes some of the unique challenges presented here, little consideration is given to the operational reality that an OU2A might present. Consideration is not given to the possibility that an OU2A may very well be where the next major U.S. military operation occurs, or the amount of resources that would be required to achieve any measurable success in stability operations there.

In their cornerstone work *Guiding Principles for Stabilization and Reconstruction*, the Institute for Peace and the U.S. Army Peacekeeping and Stability Operations Institute stated that the document “focuses on host nation outcomes, not programmatic inputs or

outputs. It is focused primarily on what the host nation and international actors are trying to achieve, not how they are trying to achieve it at the tactical level.” After all, “excellent ‘how-to’ guides already exist across the U.S. government and partner institutions.”⁵⁰ In the case of OU2As, no such guides exist to design and conduct stability operations in an environment of this nature. In order to bridge this gap in the near future, a few simple, low-cost initiatives could bring the DOD closer to understanding the implications of operating in these areas. Two are proposed here.

1. Adopt a “Failed Cities Index,” with an emphasis on the unique characteristics of each individual “failed city.” Using a model comparable to the “Failed States Index,” this index would rank failed (or failing) cities based on several sets of criteria which could include the following: degree and quality of transportation networks, electrical distribution, potable water and sewage systems, police and judicial services, social services, primary and secondary education, land tenure and land reform policies. Data to capture criminal activity and population estimates that include age distribution, ethnic and religious composition, and prominence of common diseases (malaria, HIV, etc.) would be useful as well. This index would be a beneficial resource for a variety of clients, to include the DOD, DOS, USAID, and numerous NGOs and IGOs. The Carnegie Endowment for International Peace currently maintains the “Failed States Index,” and would be well suited to create this proposed index as well.⁵¹ A “Failed Cities Index” would nest well within the framework of the “Failed States Index,” as the two are intrinsically linked.

⁵⁰. U.S. Institute of Peace and U.S. Army Peacekeeping and Stability Operations Institute, *Guiding Principles for Stabilization and Reconstruction* (Washington, DC: GPO, 2009), 13.

⁵¹. The Carnegie Institute for International Peace manages the “Failed States Index” in partnership with the Institute for Peace and the periodical *Foreign Policy*. This index ranks states on a point basis in the following categories: demographic pressures; refugees/IDPs; group grievance; human flight; uneven

2. Adopt a joint publication to address considerations for “Extreme Operational Environments,” including overpopulated, underdeveloped urban agglomerations. This joint publication would focus on challenges at the operational level of war, especially any conditions within an extreme operational environment that would significantly impact the design and execution of military operations; the environments influence on formulating realistic, achievable objectives, force employment and sustainment, and logistical requirements are just some examples of the implications of a unique battle space. The aim is not to create a separate or expanded set of doctrine for operations;⁵² rather, the aim is to provide operational commanders with a doctrine “supplement” that allows them to better understand the implications of certain operational environments. Although this work is limited to OU2As, another example of a future operational environment with unique considerations and challenges is the Arctic.

Although these measures would not eliminate the operational dilemmas that an OU2A might pose, their insight would provide significant benefit to operational commanders and their planners. Failure to understand the unique characteristics of this developing urban landscape today could have grave consequences for the U.S. military and U.S. policy makers in the not-so-distant future. That is a proposition that the U.S. cannot afford.

development; economic decline; delegitimization of the state; public services; human rights; security apparatus; factionalized elites; external intervention. For more information, see <http://www.foreignpolicy.com/failedstates>. Naval War College Professor Richard Norton recommends a somewhat similar index in “Feral Cities.” However, the index he proposes aims to provide indications that a city is *transitioning* from “Healthy” (Green), to Marginal (Yellow), to “Going Feral” (Red).

⁵². Joint Publication 3-series already has dedicated publications for each type of military operation.

Bibliography

- Baker, Bruce. "Nonstate [sic] Policing: Expanding the Scope for Tacking Africa's Urban Violence." *Africa Center for Strategic Studies Security Brief*, no. 7 (September, 2010). <http://africacenter.org/2010/09/nonstate-policing-expanding-the-scope-for-tackling-africa%E2%80%99s-urban-violence/>.
- Clinton, Hillary. "America's Pacific Century." *Foreign Policy* 189 (2011): 56-63.
- Commins, Steven. "Urban fragility and Security in Africa." *Africa Center for Strategic Studies Security Brief*, no. 12 (April, 2011). <http://africacenter.org/2011/04/urban-fragility-and-security-in-africa/>.
- Dobbs, Richard. "Metropolis Now: Mega Cities." *Foreign Policy* 181 (2010): 132-135.
- Global Security. Last modified May 7, 2011. <http://www.globalsecurity.org/military/agency/end-strength.htm>.
- Gora Mboup, Eduardo Moreno, and Oyebanji Oyeyinka. *State of the World's Cities 2011: Bridging the Divide*. London: Earthscan Publications, 2011.
- Groenewald, Jan. "Conditions for Successful Land Reform in Africa." A paper presented at Pre-IAAE Conference on African Agricultural Economics, Bloemfontein, South Africa, August 13-14, 2003. <http://ageconsearch.umn.edu/bitstream/28068/1/cp03gr01.pdf>.
- Inskeep, Steve. *Instant City: Life and Death in Karachi*. London: Penguin, 2011.
- Korogocho: 20 Years of Comboni Missionary Presence. Last modified January 31, 2008. <http://www.korogocho.org>.
- Muggah, Robert. "More Slums Equals More Violence: Renewing Armed Violence and Urbanization in Africa." A conference background paper for the Geneva Declaration on Armed Violence and Development, 2007. <http://www.genevadelaration.org>.
- Norton, Richard. "Feral Cities." *Naval War College Review*, Vol. LVI, No. 4 (2003): 97-106.
- Quinlivan, James. "Burden of Victory: the Painful Arithmetic of Stability Operations." *Rand Review*, Vol. 27, No. 2 (2003): 28-29.
- "The Strange Allure of the Slums." *The Economist* (May 3, 2007). <http://www.economist.com/node/9070714>.

Tibaijuka, Anna Kajumulu. "Africa on the Move: an Urban Crisis in the Making,." A submission to the Commission for Africa by the United Nations Human Settlements Program (UN-HABITAT), December 2004, 1-23.

U.S. Congressional Research Service. *Haiti Earthquake: Crisis and Response*. Washington, DC: GPO, 2010.

U.S. Congressional Research Service, *Troop Levels in the Afghan and Iraq Wars FY2001-FY2012: Cost and Potential*. Washington DC: GPO, 2009.

U.S. Department of Defense, *U.S. Army Field Manual 90-10 Military Operations in Urbanized Terrain*. Washington, DC: GPO, 1993.

U.S. Department of Defense, *Joint Publication 3-07 Stability Operations*. Washington, DC: GPO, 2011.

U.S. Department of Justice, Bureau of Justice Statistics. <https://www.ojp.usdoj.gov/bjs>.

U.S. Institute of Peace and U.S. Army Peacekeeping and Stability Operations Institute. *Guiding Principles for Stabilization and Reconstruction*. Washington, DC: GPO, 2002.